

NOTES ON NORTH AMERICAN SPECIES OF
 CHILOCORINI (COLEOPTERA: COCCINELLIDAE)
 WITH DESCRIPTIONS OF TWO NEW SPECIES
 OF *EXOCHOMUS* FROM MEXICO

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ABSTRACT

Brumus blumi Nunenmacher is transferred to *Brumoides*; *Exochomus mormonicus* Casey is treated as a synonym of *E. aethiops* (Bland); and *Exochomus townsendi* Casey is recorded for the first time from the United States. *Exochomus decemnotatus* and *E. minutus* are described as new.

Examination of specimens of Chilacorini in the Canadian National Collection [CNC] precipitated a further study of the black forms related to or resembling *Exochomus aethiops* (Bland). Casey (1908) described *Exochomus mormonicus* from Utah and *E. townsendi* from Chihuahua, Mexico, comparing them with the previously described *E. aethiops*. *E. mormonicus* was later treated as a subspecies or aberration of *aethiops* by Leng (1920) and

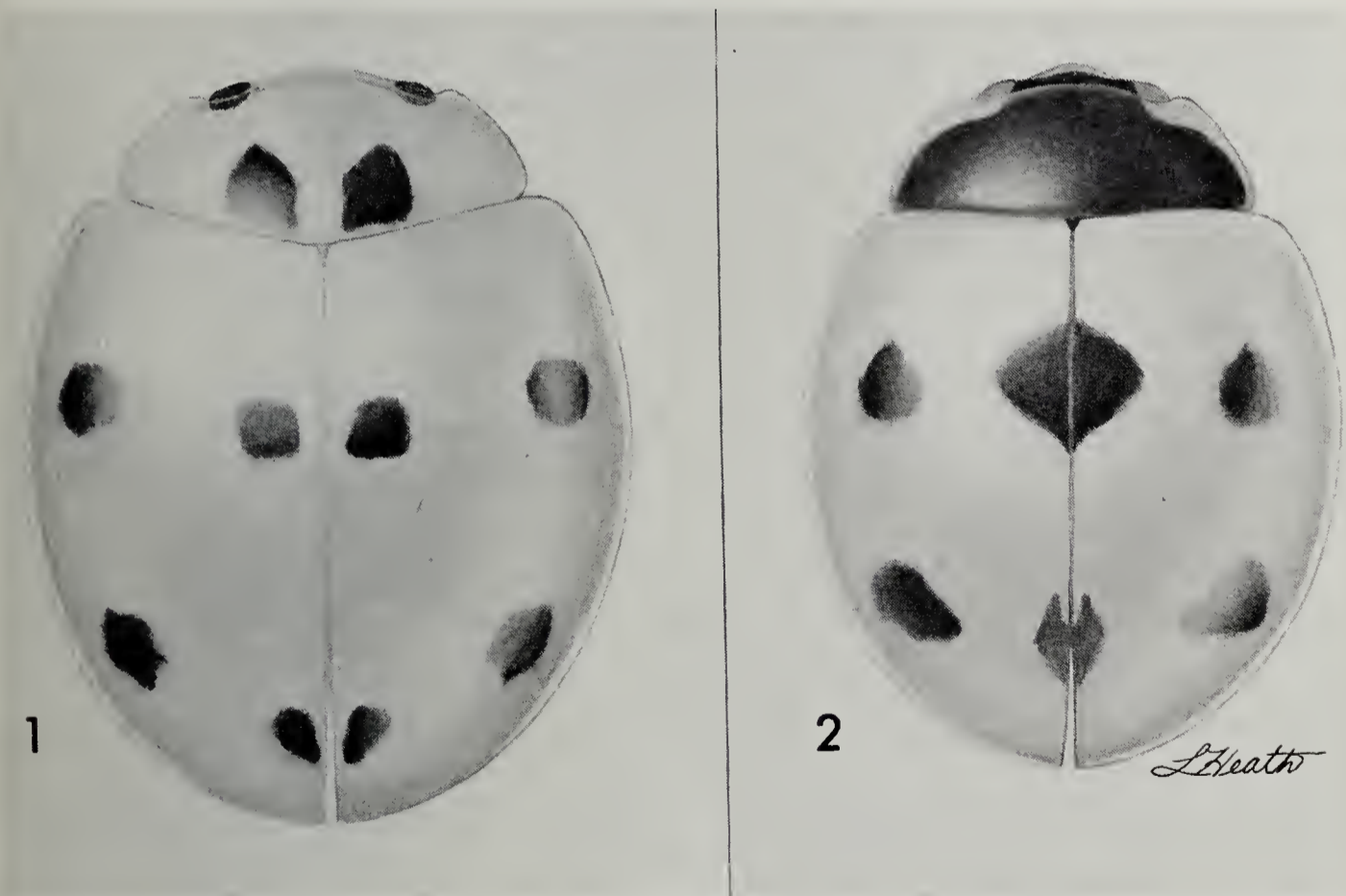


Fig. 1-2, habitus views: 1) *Exochomus decemnotatus*. 2) *Exochomus minutus*.

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Korschefsky (1931). My examination of genitalia plus the available information on geographic distribution indicates that *mormonicus* is a junior synonym of *aethiops* and cannot be maintained even as a subspecies (see synonymy below). The Mexican *E. townsendi* has not previously been reported from the U. S., but several specimens from Colorado labeled "*aethiops*" proved to be *townsendi* (see synonymy below). Nunenmacher (1934) described *Brumus blumi* from California and compared it with *aethiops* and *mormonicus*. My dissection of a paratype of *Brumus blumi* shows it to be a member of the genus *Brumoides* Chapin (1956). Nunenmacher (1934), following Korschefsky (1934), considered *aethiops* and *mormonicus* to belong in *Brumus*, but Chapin (1965) correctly included them in *Exochomus* (see synonymy below). Two new species of *Exochomus* were among the CNC specimens and are described below.

Thanks are due Miss Linda Heath for preparing the illustrations presented herein.

Exochomus aethiops (Bland)

Fig. 3, 4, 5

Coccinella aethiops Bland, 1864:72.

Exochomus marginipennis var. *aethiops*: Crotch, 1872-1873:377.

Exochomus aethiops: Casey, 1899:109.

Exochomus (Brumus) aethiops: Leng, 1908:41; Leng, 1920:217.

Brumus aethiops: Korschefsky, 1931:265; Hatch, 1961:163.

Exochomus (Exochomus) aethiops: Chapin, 1965:249.

Exochomus mormonicus Casey, 1908:411. **NEW SYNONYM.**

Exochomus (Brumus) aethiops a. *mormonicus*: Leng, 1920:217.

Brumus aethiops ab. *mormonicus*: Korschefsky, 1931:265.

Exochomus (Exochomus) mormonicus: Chapin, 1965:249.

This species occurs from western Kansas and Nebraska to the Pacific Coast and from Wyoming, Idaho, and southeastern Oregon south to Durango and Nuevo Leon, Mexico. The solid black dorsal surface immediately distinguishes *aethiops* from all related species except *E. townsendi* and *Brumoides blumi* (see comments under those species).

There are 4 type specimens of *mormonicus* in the Casey collection [USNM], all labeled "Marysvale, Ut., Aug., Wickham", and bearing USNM type no. 35556. The first of these is here designated lectotype, the other 3 paralectotypes, labels are attached.

Exochomus townsendi Casey

Fig. 6, 7, 8

Exochomus townsendi Casey, 1908:411; Korschefsky, 1931:264; Blackwelder, 1945:451.

E. townsendi was described from 2 males from Colonia Garcia, Chihuahua, Mexico, collected by Townsend. The first of these 2 specimens in the Casey Collection [USNM], bearing the type number 35557, is here designated as lectotype and the second specimen as paralectotype, labels are attached.

No specimens other than the type series have been seen from Mexico. Eight specimens of this species from Colorado have been examined. The following localities are apparently the first recorded subsequent to the original description: COLORADO: Gunnison Co., near Gunnison; Estes Park; Garland; Buena

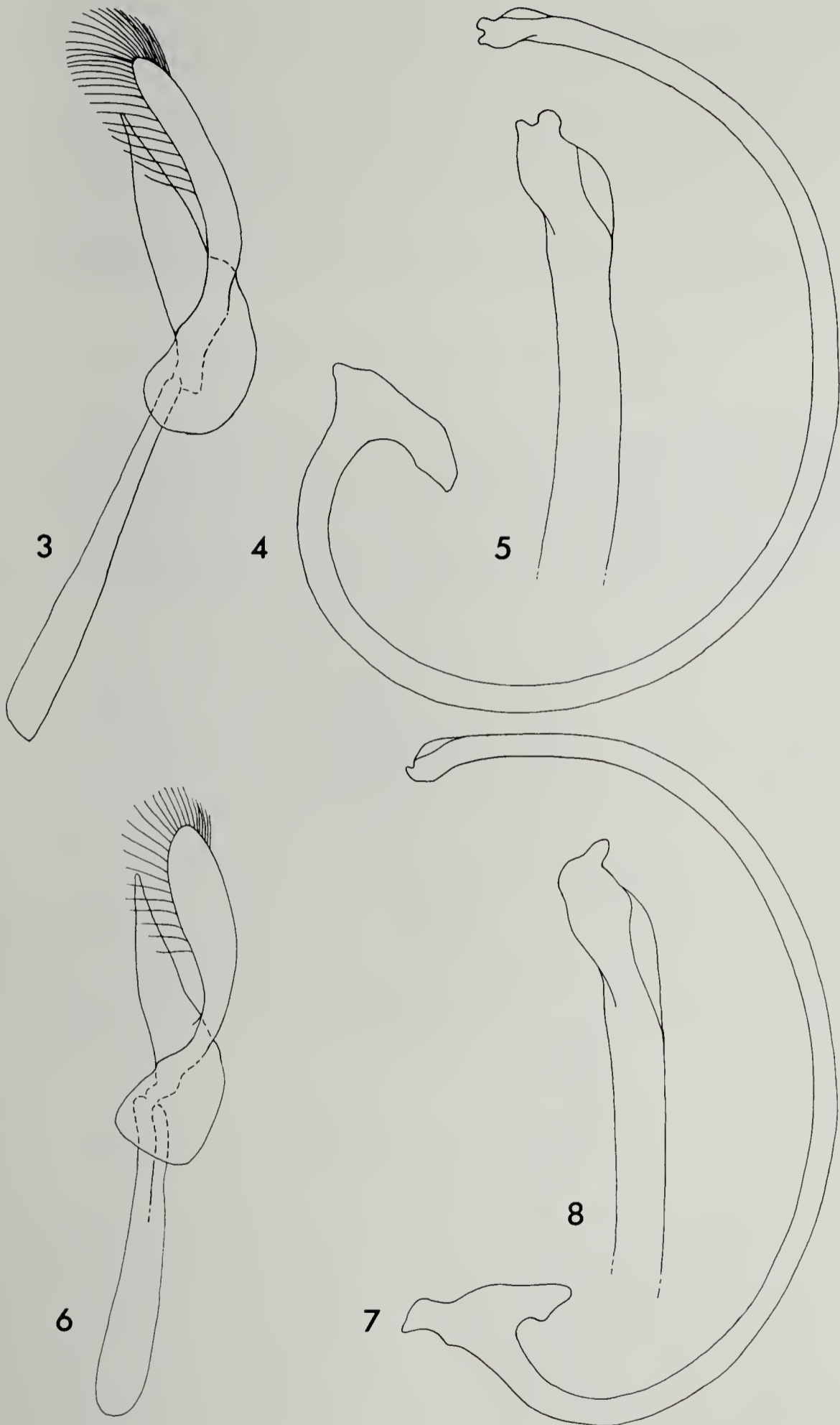


Fig. 3-8, male genitalia: 3-5) *Exochomus aethiops*: 3) phallobase, lateral; 4) siphon; 5) tip of siphon enlarged, 6-8) *Exochomus townsendi*: 6) phallobase, lateral; 7) siphon; 8) tip of siphon enlarged.

Vista. The species probably occurs in Arizona and New Mexico but the records of this have probably been obscured by the mixing of *townsendi* specimens with series of the more abundant *aethiops* in collections.

At first glance *aethiops* and *townsendi* are extremely similar. *E. townsendi* has the lateral margin of the elytron less than half as strongly explanate as *aethiops* and in dorsal view the sides of the pronotum and elytron appear almost continuous in *townsendi*, definitely discontinuous in *aethiops*. The lateral margin of the elytron is also sinuate medially in *townsendi*, straight in *aethiops*. The form of *townsendi* is somewhat elongate, the form of *aethiops* is round. The male genitalia of *townsendi* have the parameres broader and the basal lobe relatively shorter and broader than the corresponding structures in *aethiops* (Fig. 3, 4, 5, 6, 7, 8).

Brumoides blumi (Nunenmacher), n. comb.

Fig. 9

Brumus blumi Nunenmacher, 1934:114; Blackwelder, 1945:48.

Brumus blumi must now be placed in *Brumoides* Chapin because of the 8-segmented antennae. *Brumoides* is a North American genus. *Brumus* has 10-segmented antennae and is an Old World genus. Chapin (1965) did not examine specimens of *blumi* while preparing his excellent paper on chilocorine

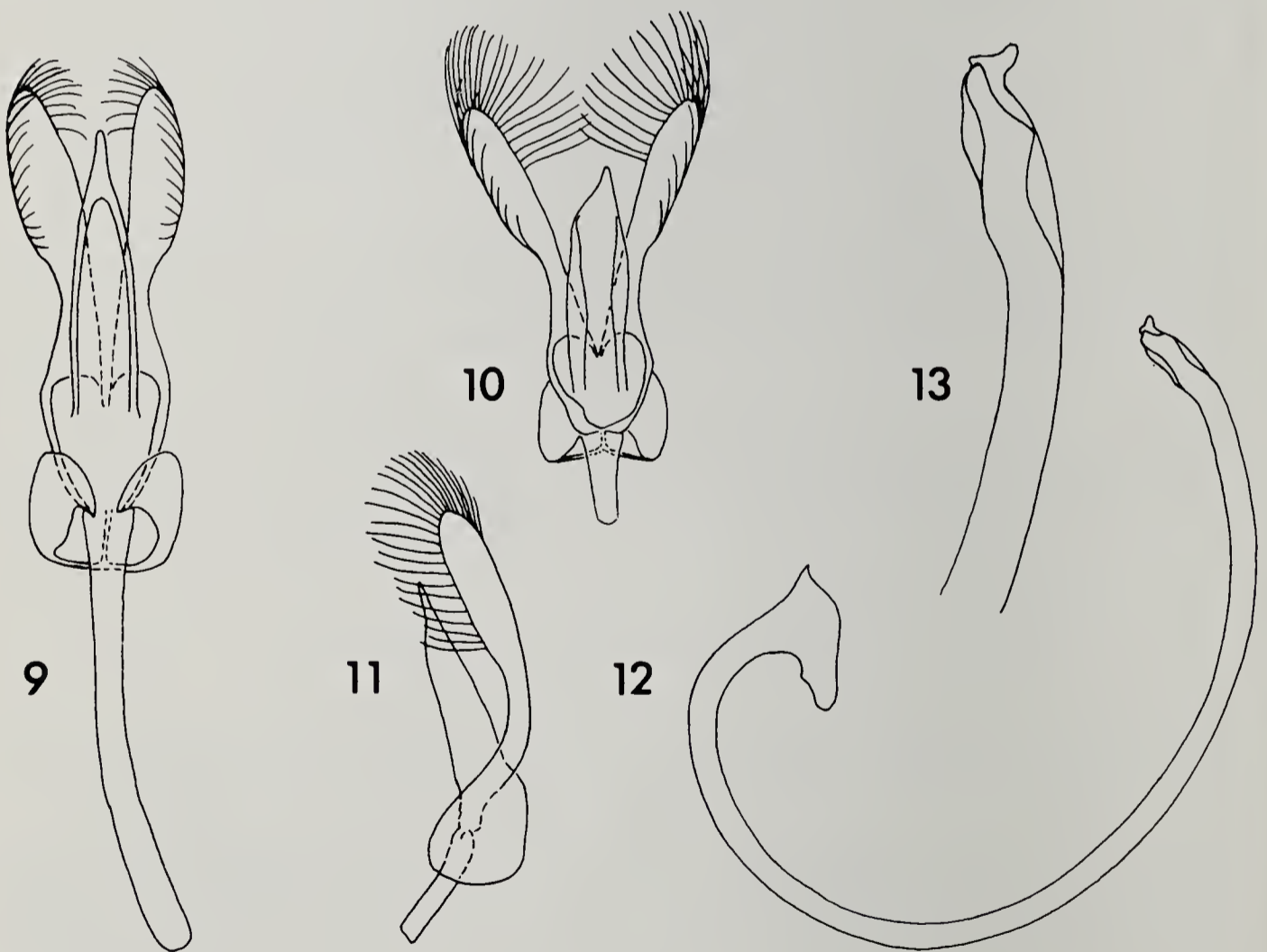


Fig. 9-13, male genitalia: 9) *Brumoides blumi*, ventral view of phallobase; 10-12) *Exochomus minutus*: fig. 10, phallobase, ventral view; 11) phallobase, lateral view; 12) siphus; 13) tip of siphus enlarged.

genera, thus he did not indicate to what genus *blumi* belonged. A paratype of *blumi* in the USNM collection was available for study.

B. blumi resembles *E. townsendi* in external appearance but has simple tarsal claws. The claws in species of *Exochomus* have a basal tooth or angulation. The male genitalia have the basal lobe symmetrical (Fig. 9) while it is asymmetrical in species of *Exochomus*.

All specimens of *blumi* examined have been from CALIFORNIA, Contra Costa and Alameda counties. I am not aware of it having been recorded from anywhere other than California.

Exochomus (Exochomus) decemnotatus Gordon, **new species**

Fig. 1

Holotype: length 2.83 mm, greatest width 2.35 mm. Form rounded, slightly elongate, lateral margin of elytron feebly but distinctly explanate, discontinuous with pronotal margin in dorsal view. Color mostly reddish yellow; pronotum with an irregularly oval, black spot at base at each side of midline; elytron with 4 black spots arranged in 2 transverse rows, first row just anterior to middle, second row on apical one-third, marginal bead with narrow piceous band (Fig. 1); pro-, meso- and metasterna and median area of first 2 abdominal sterna black. Head distinctly alutaceous with fine punctures separated by 3 to 5 times their diameter. Pronotum and elytron feebly alutaceous, shining, with very fine punctures separated by 2 to 6 times their diameter. Epipleuron strongly descending externally with distinct, yellowish-white pubescence medially. Postcoxal line on first abdominal sternum complete, extending beyond middle of sternum. Apical margin of fifth sternum rounded, not emarginate. **Holotype:** Female [CNC], MEXICO: 5 mi. W. Durango, Durango, 11-VI-1964, H. F. Howden.

The only species of *Exochomus* previously known from Mexico or Central America with a color pattern even remotely resembling that of *decemnotatus* is *marginipennis* LeConte. The pale pronotum and elytra with the delicate, sharply defined, black spots will separate *decemnotatus* from *marginipennis*. In addition, specimens of *marginipennis* are nearly always larger than the type of *decemnotatus*. The smallest specimen of *marginipennis* observed was 2.80 mm in length.

Exochomus (Exochomus) minutus Gordon, **new species**

Fig. 2, 10, 11, 12, 13

Holotype: length 2.37 mm, greatest width 2.05. Form rounded, slightly elongate, lateral margin of elytron feebly but distinctly explanate, discontinuous with pronotal margin in dorsal view. Head black except anterior clypeal margin narrowly piceous and labrum yellow; pronotum black except antero-lateral angles broadly yellow; elytron yellow with 4 black spots, first spot anterior to middle and outside of discal area, second spot on suture anterior to middle, third spot at middle of posterior one-third, fourth spot small, elongate, on suture in apical third (Fig. 2); ventral surface black except hypopleuron, epipleuron and lateral margin of abdominal sterna yellow, apices of tibiae and tarsi reddish brown. Head and pronotum finely alutaceous, head more strongly so, punctures fine, separated by 1 to 3 times their diameter on head, 2 to 6 times their diameter on pronotum. Elytron shining, feebly

alutaceus, punctures nearly invisible, separated by 2 to 6 times their diameter. Epipleuron strongly descending externally. Postcoxal line on first abdominal sternum complete, extending beyond middle of sternum. Apical margin of fifth sternum feebly emarginate medially. Genitalia with basal lobe shorter than paramere, asymmetrical, apex bluntly pointed; paramere narrowed above base, abruptly widened before middle (Fig. 10, 11); siphon strongly curved, slightly thickened in apical third, orifice lateral (Fig. 12, 13).

Holotype: male [CNC], MEXICO: Oaxaca, 8000', km. 611-648, Rte 190, 30-VII-1962, H. E. Milliron.

Paratype: 1 male [USNM], MEXICO: Oaxaca, Mitla, 6000', 28-VII-1962, H. E. Milliron.

This little species resembles some of the forms of *E. marginipennis* LeC. in color pattern. It is much smaller in size and the male genitalia are different. The dorsal color pattern of *minutus* actually resembles that of *Zagreus ritchiei* (Sicard) from Jamaica, except *ritchiei* has a small, black spot at the apex of the elytron.

REFERENCES

- BLACKWELDER, R. E. 1935. Fourth supplement 1933-1938 (inclusive) to the Leng catalogue of Coleoptera of America, north of Mexico. 146 p. Mount Vernon, New York.
- BLACKWELDER, R. E. 1945. Checklist of the coleopterous insects of Mexico, Central America, the West Indies, and South America. Part 3. United States Nat. Mus. Bull. 185:1-188.
- BLAND, J. H. B. 1864. Descriptions of several new species of North American Coleoptera. Proc. Ent. Soc. Philadelphia 3:65-72.
- CASEY, T. L. 1899. A revision of the American Coccinellidae. J. New York Ent. Soc. 7:71-169.
- CASEY, T. L. 1908. Notes on the Coccinellidae. Canadian Ent. 40:393-421.
- CHAPIN, E. A. 1965. The genera of the Chilacorini (Coleoptera: Coccinellidae). Bull. Mus. Comp. Zool. Harvard Univ. 133:229-271.
- CROTCH, G. R. 1872-1873. Revision of the Coccinellidae of the United States. Trans. American Ent. Soc. 4:363-382.
- HATCH, M. H. 1961. The beetles of the Pacific Northwest, Part III: Pselaphidae and Diversicornia I. Univ. Washington Pub. Biol. 16:1-490.
- KÖRSCHESKY, R. 1931. Pars 118, Coccinellidae I. 16:1-224, in Coleopterorum Catalogus.
- LENG, C. W. 1908. Notes on Coccinellidae. — III. J. New York Ent. Soc. 16:33-44.
- LENG, C. W. 1920. Catalogue of the Coleoptera of America, North of Mexico. 470 p. Mount Vernon, New York.

